Farm to School Efforts in Orange, NJ

Connecting garden education to the traditional curriculum while providing hands-on learning opportunities

Outdoor Classroom

Background

- *In 2012, Orange was attempting a few small scale gardening projects in a couple of its elementary schools. Local residents pitched in to help maintain the produce.*

- *However, problems with fumes, hilly terrain, access to water proved challenging.*

Funding the Outdoor Classroom

The district wrote and was awarded a grant to establish an outdoor learning space/greenhouse in one of its K – 7 schools. The grant would support the establishment of a

- Greenhouse (18’ x 22’) for herbs and plants
- Outdoor garden for vegetables
- Weather Station to assess wind speed, barometric pressure, temperature, and hooked into Weather Bug, a network of real-time weather forecasting
- Butterfly Garden
- Composting Station
- Rock Garden
- Outdoor Vegetable Garden (seasonal planting)
- Reading Solarium

The topics addressed would support topics presented within the FOSS curriculum (e.g. Plants, study of rocks, insects, etc.) and tied to other content areas such as Mathematics (measurement).

Ribbon Cutting

We unveiled the completed Outdoor Classroom on

May 22, 2015

The Curriculum

The curriculum in the K- 7 program includes school garden lessons for students in grades kindergarten through 7th grade that align with state standards for literature, science and math.

Hands-on activities include planting, watering, composting, harvesting, cooking and tasting.

Reinvesting in the Classroom

- The produce is sold during occasional Farmer's Market days as an extension of the school's Micro Society program

Next Steps

- Encourage the more consistent use of the Outdoor Classroom via lab-like rotations
- Write the use of the Outdoor Classroom into the curriculum

Hydroponic Greenhouse

Background

- *In 2012, Orange began conversations with a local hydroponic greenhouse, Garden State Urban farms, to discuss the idea of establishing a Hydroponic Greenhouse on our high school's campus*

Benefits of Hydroponic Growing

- Produce grows year round
- Produce is grown in Oasis; Fewer threats associated with soil
- Produce grows in a fraction of the time

Grand Opening

The Hydroponic Greenhouse was opened in 2013

- The Hydroponics/Sustainability course is offered as a 2.5 credit semester course
- There are three Nutrient Flow Transfer growing systems ideal for growing leafy greens (i.e. kale, lettuce, Swiss chard) and herbs (i.e. Basil, parsley, cilantro), and an
- Propagation Tables/Ebb and Flow Tables, the industry standard, are used for germinating and propagating seedlings
- The tables allow a large number of seedlings to be propagated in a confined space before they are transplanted into the main hydroponic system

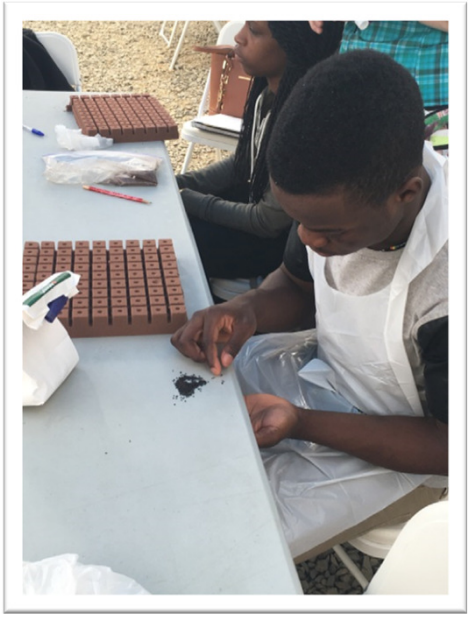
Hydroponics Curriculum

Orange's Hydroponics/Sustainability curriculum exposes high school students to healthier food sources while encouraging students to examine sustainability and food production issues. Much of this is accomplished through experiential learning experiences, encouraging students to view the experience as a venture in entrepreneurship.

Sustainability Topics Include:

- The availability natural resources
- Increases in populations or the phenomena of mass migrations leading to food shortages
- Insect pests and variations
- The effect of economics and politics on food choices
- Social justice topics on the inequities in quality and supply of food.
- How government subsidies affect school lunches and food choices people make.

Hydroponic Greenhouse



Classes work in the hydroponic greenhouse year round. Its produce makes its way into meals by way of fresh basil, lettuce, etc.

Use of the Products

- Lettuce produced is donated to the school's cafeteria
- Produce is sold to faculty and staff
- Romaine lettuce, Mescaline lettuce, basil, parsley and cilantro is also used in the culinary programs at OHS and CIAO

Next Steps

- Food pantries
- Business
- Plan for more school gardens throughout district